Attunity Compose for Data Warehouses 6.3 introduces a number of features and enhancements, which are described in the following sections:

- Migration and Upgrade
- Support for Microsoft Azure SQL Data Warehouse
- Automating Post-Import Procedures
- Automating Project Versioning
- Other Enhancements
- Resolved Issues
- Known Issues
Migration and Upgrade

The following procedure describes the steps required to successfully upgrade from Compose 3.1 to Compose for Data Warehouses 6.3.

**Note** Before upgrading, it is recommended to validate the model and to delete tasks that are not valid.

All CLI commands in the procedure should be run from the following directory:

<INSTALL_DIR>\Compose for Data Warehouses\bin

**To upgrade from Compose 3.1 to Compose for Data Warehouses 6.3:**

1. Install Compose for Data Warehouses 6.3 (as a new installation) on the same machine as Compose 3.1.
2. Disable scheduled jobs on Compose 3.1.
3. Stop the **Attunity Compose** (3.1) service.
4. Stop the **Attunity Compose for Data Warehouses** (6.3) service.
5. Copy the data directory from <INSTALL_DIR>\Compose to <INSTALL_DIR>\Compose for Data Warehouses, replacing the existing data directory.
6. Run the following command:
   ```
   ComposeCli.exe upgrade
   ```
7. Start the **Attunity Compose for Data Warehouses** service.
8. Run the following command:
   ```
   ComposeCli.exe connect
   ```
9. Generate all ETLs on Compose for Data Warehouses 6.3 by running the following command:
   ```
   ComposeCli.exe generate_etls
   ```
   Any invalid tasks will be skipped and an appropriate error will be printed to the output. For more details about a specific error, open the the **composeclient.log** in the Log Viewer and search for [ERROR].

**Notes**

- The ETL generation process may take a while (spending on the number of tasks and projects) as Compose for Data Warehouses needs to connect to each of the relevant databases.
- If you prefer, you can regenerate the ETL instructions manually for each task. Note however that a task will fail to run until its ETL instructions are regenerated.

10. Enable scheduled jobs on Compose for Data Warehouses 6.3.
11. Backup Compose 3.1. Once you have verified that everything is working properly with the new Compose for Data Warehouses 6.3 installation, proceed to uninstall Compose 3.1.

Support for Microsoft Azure SQL Data Warehouse
Compose for Data Warehouses 6.3 introduces support for Microsoft Azure SQL Data Warehouse both as a data source and as a data warehouse.

Automating Post-Import Procedures
The new `autogen` CLI parameter saves time by automating process which previously had to be performed manually after importing a project. When this parameter is specified, Compose for Data Warehouses will:

- Validate the model and adjust the data warehouse if needed
- Create the data warehouse tables if they do not exist
- Validate the data warehouse
- Adjust the data warehouse if needed
- Generate all data warehouse tasks
- Create, adjust and generate all data marts

Automating Project Versioning
The Compose for Data Warehouses CLI can now be used to version a project in Git Version Control. This is especially useful for organizations that wish to include versioning in their automated business procedures.

Other Enhancements

- A `Select All` option has been added to the `Entities` tab in the `Import from Project` window.
- A Trim function has been added to the Expression Builder (for use with Microsoft SQL Server 2017).
- `Search` - When searching within the `Manage ETL Sets` window, the Search box in the top right of the window retains the search term, even when switching between the tabs.
## Resolved Issues

The following issues have been resolved in this release.

<table>
<thead>
<tr>
<th>Component/Process</th>
<th>Type</th>
<th>Description</th>
<th>Ref #</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI - MySQL Source</td>
<td>Issue</td>
<td>An error message would be wrongly displayed when no password was specified for a MySQL source.</td>
<td>CMPS-3801</td>
</tr>
<tr>
<td>UI - Monitor</td>
<td>Issue</td>
<td>The monitor progress bar would sometimes disappear and then return.</td>
<td>CMPS-3239</td>
</tr>
<tr>
<td>Reporting</td>
<td>Issue</td>
<td>When a connection to the data warehouse could not be established, a message stating that data marts are undefined would be displayed, even though they were defined.</td>
<td>CMPS-4203</td>
</tr>
<tr>
<td>Logs</td>
<td>Issue</td>
<td>The data logs are located in several different places, making them difficult to find. The issue was resolved by listing the location of the log files in the Help.</td>
<td>CMPS-1177</td>
</tr>
<tr>
<td>Tasks</td>
<td>Issue</td>
<td>Aborting a task would not close the active session with Oracle.</td>
<td>CMPS-3688</td>
</tr>
<tr>
<td>Search</td>
<td>Enhancement</td>
<td>See <strong>Search</strong> in <strong>Other Enhancements</strong> above.</td>
<td>161568</td>
</tr>
</tbody>
</table>
Known Issues

The following are the known issues in this release.

<table>
<thead>
<tr>
<th>Component/Process</th>
<th>Description</th>
<th>Ref #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncertified Data Warehouses</td>
<td>Amazon Redshift and Teradata Data Warehouses are not certified for use in this version.</td>
<td>N/A</td>
</tr>
<tr>
<td>Changing the schema in the Landing Area</td>
<td>When changing the name of the schema in the Landing Area connection settings, the <strong>Edit Mappings</strong> window displays the new schema, but the ETL will still contain the old schema name after it is regenerated.</td>
<td>183655  CMPS-7024</td>
</tr>
<tr>
<td>DDL Scripts</td>
<td>Some of the DDL scripts contain the database name and some do not. If you need to run the scripts manually, make sure to run them on the database specified in the script.</td>
<td>CMPS-2922</td>
</tr>
<tr>
<td>Discovery</td>
<td>Discovering tables that have column names with spaces, results in missing mappings for those columns.</td>
<td>CMPS-3294</td>
</tr>
</tbody>
</table>
| Discovery                  | Workaround:
Create the mappings manually.                                                                                                                                                                          |         |
<p>| Teradata                   | When ingesting data from Teradata, Compose partially treats primary keys as case sensitive and partially as case insensitive. This is due to a conflict with the session mode used in the landing area (case sensitive) and the session mode Compose uses to create the staging tables (case insensitive). This may lead to duplicate records. | CMPS-3623 |
| Data Marts                 | A data mart that is not valid will change its status to valid if the Attunity Compose service is restarted.                                                                                                 | CMPS-3665 |
| Pivot Table                | When the same column is included in two different dimensions, the pivot table shows the wrong data.                                                                                                         | CMPS-3995 |
| Expression Testing         | Certain expressions may fail during runtime, even though clicking <strong>Test</strong>                                                                                                                                 | CMPS-6636 |</p>
<table>
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</thead>
<tbody>
<tr>
<td>Expression in the Expression Builder</td>
<td>indicated that they were valid. This is because clicking <strong>Test Expression</strong> runs a query whereas during runtime, the expression is run as a sub-query. This issue arises partly because the rules that govern queries are slightly different from the rules that govern sub-queries. For example, a semi-colon (;) is allowed in a query but not in a sub-query.</td>
<td></td>
</tr>
<tr>
<td>Global Transformations in Replicate</td>
<td>Replicate allows you to define global transformations that are applied to Change Tables during task runtime. However, it is not recommended to define the following global transformations, as they are not compatible with Compose tasks:</td>
<td>CMPS-6790</td>
</tr>
<tr>
<td></td>
<td>» Rename Change Table</td>
<td>182270</td>
</tr>
<tr>
<td></td>
<td>» Rename Change Table schema</td>
<td></td>
</tr>
<tr>
<td>Workaround:</td>
<td>If you need to use the Rename Change Table transformation in the Replicate task, set the primary key manually in the database.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If you need to use the Rename Change Table schema transformation in the Replicate task, perform the Discover operation (to generate the Model) from the source and not from the landing area. See the Help for more information about Discovering from the source.</td>
<td></td>
</tr>
<tr>
<td>Running Adjust Scripts on Microsoft Azure SQL Data Warehouse</td>
<td>Adjust scripts that need to be run manually start with DROP CONSTRAINT, which causes them to fail.</td>
<td>CMPS-7015</td>
</tr>
<tr>
<td></td>
<td><strong>Workaround:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Edit the script to remove the DROP CONSTRAINT section and then run it.</td>
<td></td>
</tr>
</tbody>
</table>